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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/594,885

06/11/2007

Hisao Kakegawa

YPA-0004

8133

74384

7590

10/06/2009

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EXAMINER

HRUSKOCI, PETER A

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

10/06/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/594,885 | KAKEGAWA ET AL. | |
| | Examiner | Art Unit | |
| | /Peter A. Hruskoci/ | 1797 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/29/06, and 2/6, and 6/11/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/6/07</u> . | 6) <input type="checkbox"/> Other: _____ |

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The disclosure is objected to because of the following informalities: In the specification on pages 4-6 “2A”, “3A”, “4A”, “5A”, “1B”, “2B”, “3B”, “4B”, and “5B” do not appear to be shown in FIGS. 1 and 2.

Appropriate correction is required.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1 and 2 “strongly” and “toxic substances” are vague and indefinite because it is unclear how these terms further limit the claims. It is noted that page 4 of the specification is drawn to specific substances and a pH of 0.1 or less. In claims 1 and 2 “it”, in claim 5 “the step of turning...strong acidity”, and in claim 6 “the weak acidity” lack clear antecedent basis. Claims 1 and 2 are considered incomplete because it is essential that the alkaline and acid substances be added to produce a specific pH, respectively. Claims 3 and 4 depend from claims 1 and 2.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki et al. 6,572,771 in view of Van De Steeg et al. 6,419,832. Yamasaki et al. disclose (see col. 11 line 42 through col. 14 line 48) a method of treating acidic wastewater containing fluorine substantially as claimed. The claims differ from Yamasaki et al. by reciting the addition of hydroxyapatite to the wastewater to precipitate solid constituents. Van De Steeg et al.

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disclose (see col. 2 line 34 through col. 4 line 57) that it is known in the art to add bone ash or hydroxyapatite, aluminum sulfate, and calcium hydroxide to a wastewater containing uranium and fluoride, to aid in neutralizing the wastewater and precipitating the uranium and fluoride. It would have been obvious to one skilled in the art to modify the method of Yamasaki et al. by addition of the hydroxyapatite in view of the teachings of Van De Steeg et al., to aid in precipitating fluoride from the wastewater. The specific sequence used for the addition of the absorbing and coagulating agent or aluminum sulfate, would have been an obvious matter of process optimization to one skilled in the art, depending on the specific wastewater treated and results desired, absent a sufficient showing of unexpected results.

Claim 2 properly written to overcome the above 35 USC 112 rejection, would be allowable.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Peter A. Hruskoci/ whose telephone number is (571) 272-1160. The examiner can normally be reached on Monday through Friday from 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter A. Hruskoci/
Primary Examiner
Art Unit 1797

10/1/09